



### **INTERTIDAL Description**

- Exposed tidal flats are broad intertidal areas composed primarily of sand and minor amounts of gravel.
- The presence of sand indicates that tidal currents and waves are strong enough to mobilize the sediments.
- They are usually associated with another shoreline type on the landward side of the flat, though they can occur as separate shoals; they are commonly associated with tidal inlets.
- Biological use can be very high, with large numbers of infauna, heavy use by birds for roosting and foraging, and use by foraging fish.

### **Predicted Oil Behavior**

- Oil does not usually adhere to the surface of exposed tidal flats, but rather moves across the flat and accumulates at the high-tide line.
- Deposition of oil on the flat may occur on a falling tide if concentrations are heavy.
- Oil does not penetrate water-saturated sediments, but may penetrate coarse-grained sand and coat gravel.
- Biological damage may be severe, primarily to infauna, thereby reducing food sources for birds and other predators.

### **Response Considerations**

- Currents and waves can be very effective in natural removal of the oil.
- The use of heavy machinery should be restricted to prevent oil mixing into the sediments.

# Exposed Tidal Flats

# INTERTIDAL

Response Method	Oil Category				
	I	II	III	IV	V
<b>Oil Category Descriptions</b>					
I – Gasoline products					
II – Diesel-like products and light crudes					
III – Medium grade crudes and intermediate products					
IV – Heavy crudes and residual products					
V – Non-floating oil products					
<b>The following categories</b> are used to compare the relative environmental impact of each response method in the specific environment and habitat for each oil type. The codes in each table mean:					
A = The least adverse habitat impact.					
B = Some adverse habitat impact.					
C = Significant adverse habitat impact.					
D = The most adverse habitat impact.					
I = Insufficient information - impact or effectiveness of the method could not be evaluated.					
— = Not applicable.					
Natural Recovery	A	A	A	A	A
Barriers/Berms	B	B	B	B	B
Manual Oil Removal/Cleaning	—	C	B	B	B
Mechanical Oil Removal	—	D	D	D	D
Sorbents	—	A	A	B	B
Vacuum	—	C	B	B	B
Debris Removal	—	B	B	B	B
Sediment Reworking/Tilling	—	—	C	C	C
Vegetation Cutting/Removal	—	D	D	D	D
Flooding (deluge)	—	A	A	A	B
Low-pressure, Ambient Water Flushing	—	B	B	C	C
High-pressure, Ambient Water Flushing	—	—	—	—	—
Low-pressure, Hot Water Flushing	—	—	—	—	—
High-pressure, Hot Water Flushing	—	—	—	—	—
Steam Cleaning	—	—	—	—	—
Sand Blasting	—	—	—	—	—
Solidifiers	—	C	C	—	—
Shoreline Cleaning Agents	—	—	—	—	—
Nutrient Enrichment	—	I	I	I	I
Natural Microbe Seeding	—	I	I	I	I
In-situ Burning	—	—	—	—	—

Consult the *Environmental Considerations for Marine Oil Spill Response* document referenced on page 5 before using this table.